

# Lyme Disease in Loudoun County

Results from a Survey of Reported Cases  
2003-2006



Presented to the Loudoun County  
Board of Supervisors

Dr. David Goodfriend – Health Department

April 19, 2006



## Background

- Between 1999 and 2005, the number of reported cases of Lyme disease in Loudoun County increased from 29 to 168 per year
- The number of chronic Lyme sufferers in Loudoun County continues to increase
- Interventions taken to date have not blunted this trend



# Study

- **Objective:**

- To determine risk factors for contracting Lyme disease in Loudoun County

- **Sample:**

- 371 people with Lyme were reported to the Loudoun County Health Department between January 2003 and February 2006

- **Method:**

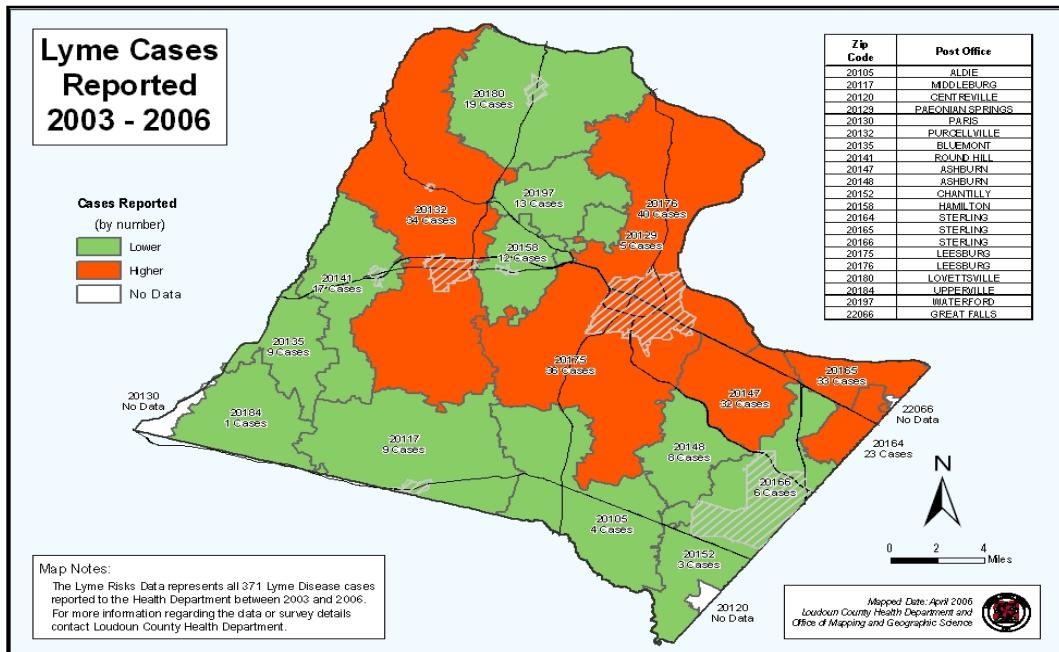
- Surveys were mailed to all 371 people

- **Returns:**

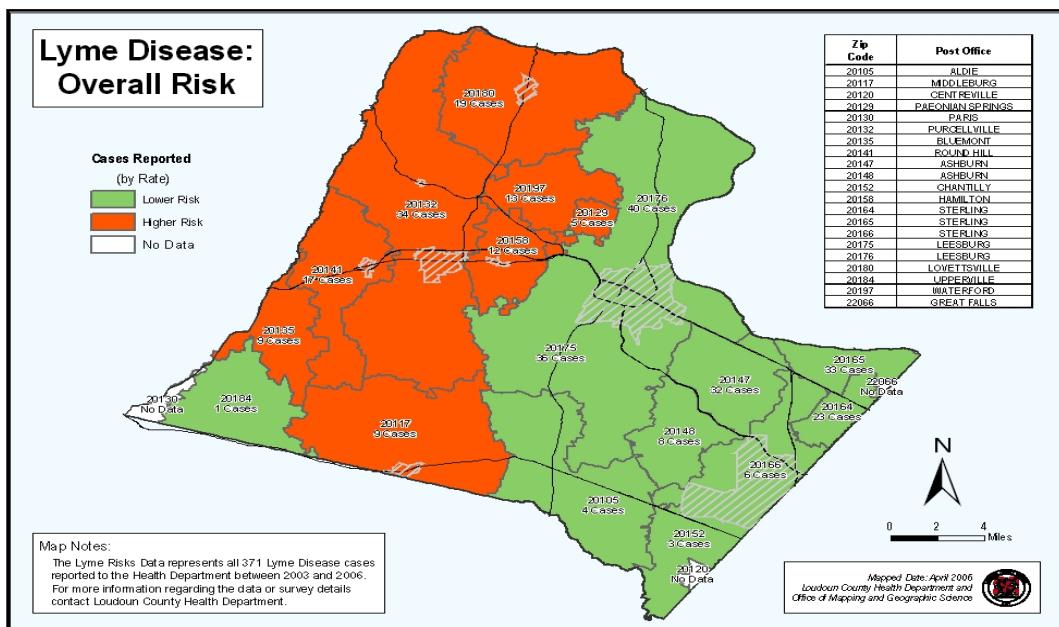
- 184 valid responses (50.6%) were returned



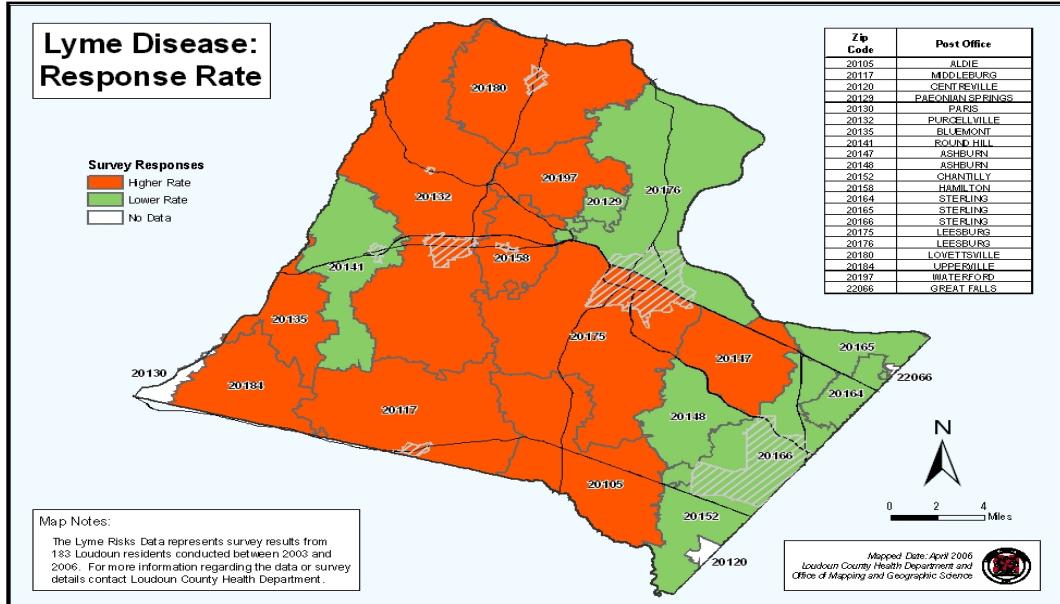
# Population



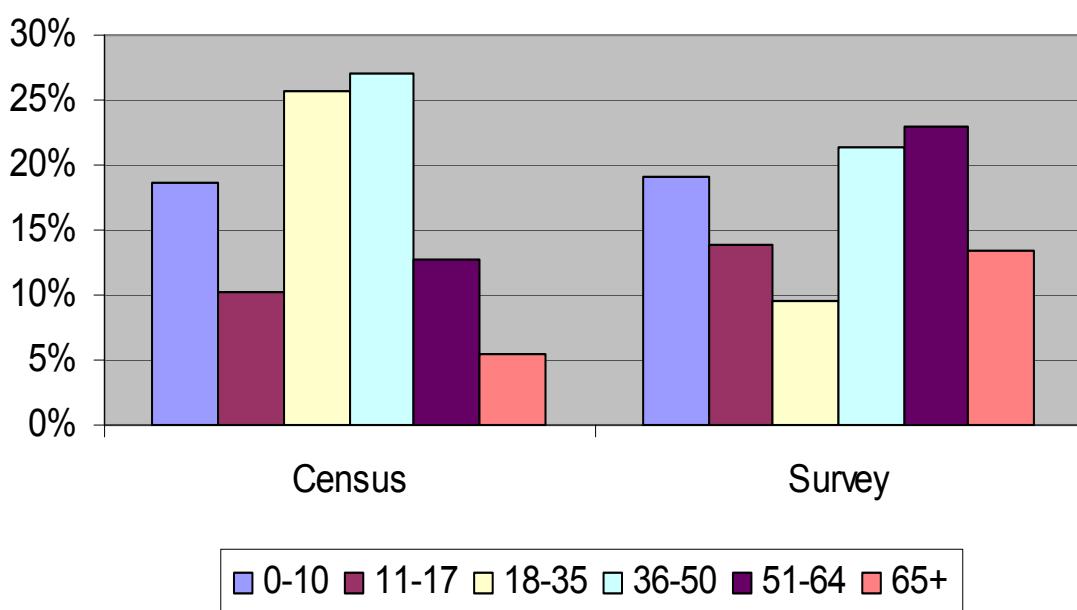
- Lyme cases were reported from all Loudoun zip codes



- Western Loudoun residents were at higher risk for having Lyme disease reported



- Western residents were slightly more likely to respond to the survey
- 50.5% were male

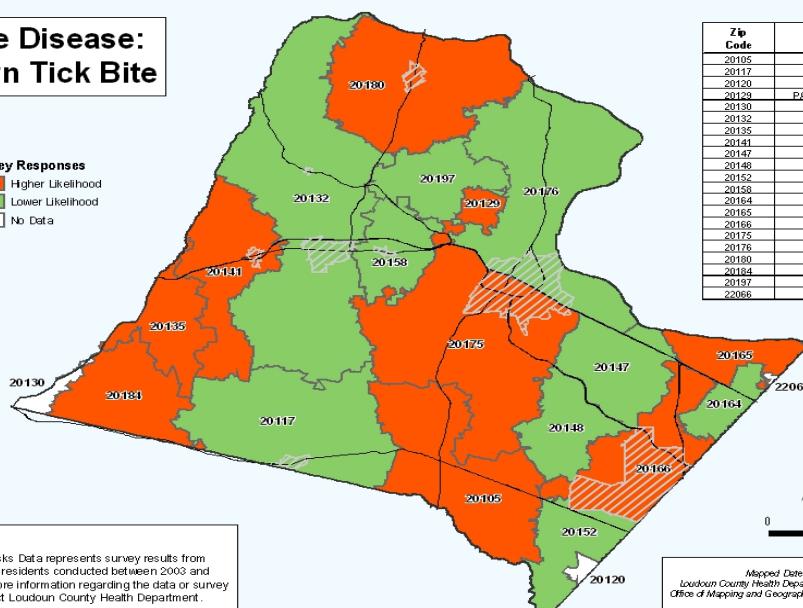


- Survey respondents were more likely to be older than the general population

# Suspected Method of Infection

## Lyme Disease: Known Tick Bite

Survey Responses  
■ Higher Likelihood  
■ Lower Likelihood  
■ No Data

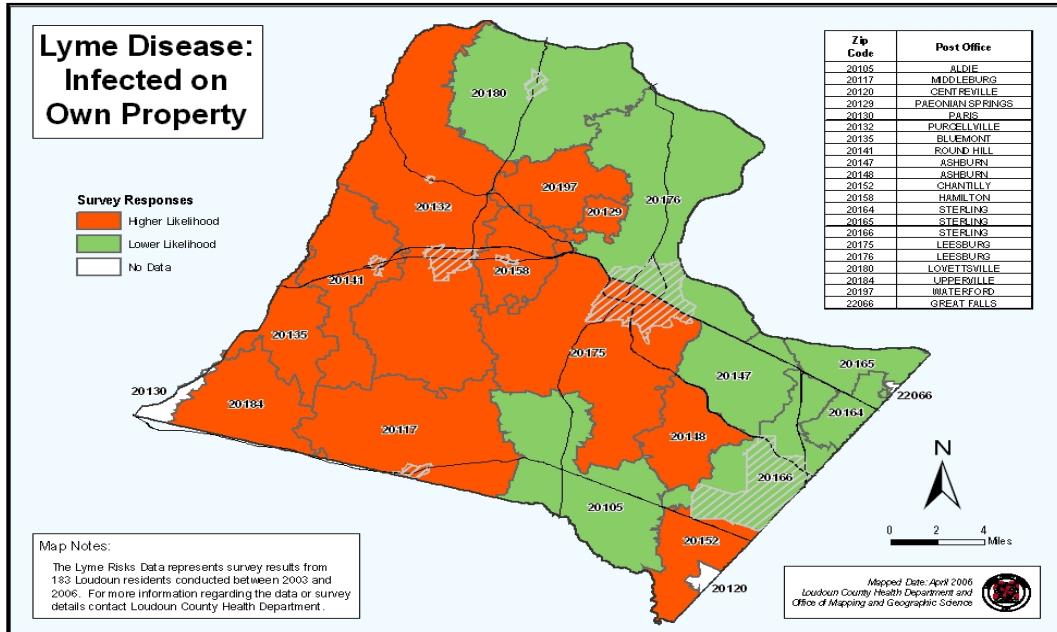


Map Notes:

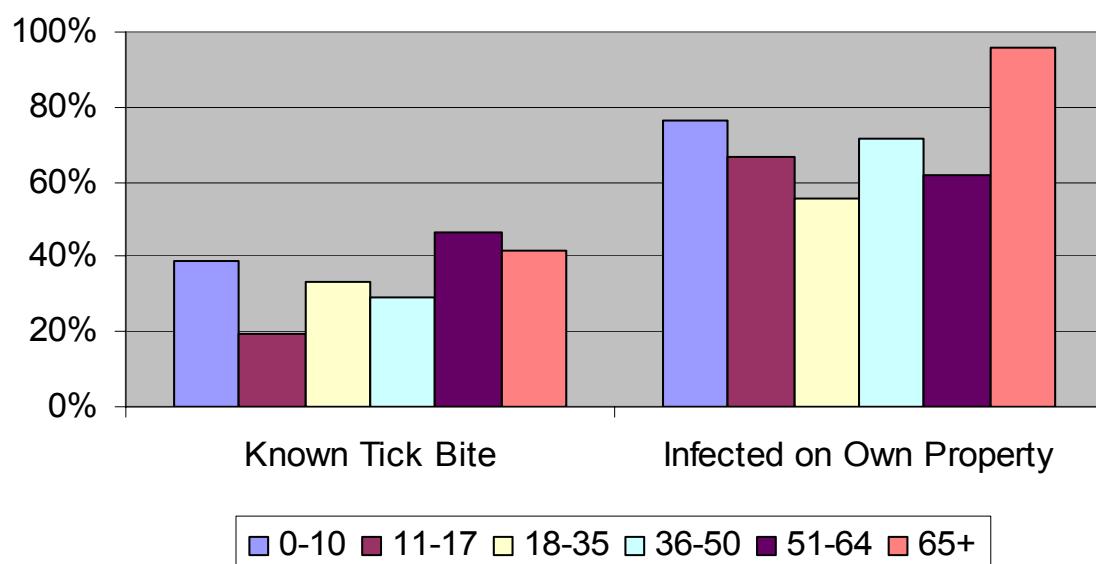
The Lyme Risks Data represents survey results from 133 Loudoun residents conducted between 2003 and 2006. For more information regarding the data or survey details contact Loudoun County Health Department.

Mapped Date: April 2006  
Loudoun County Health Department and  
Office of Mapping and Geographic Science

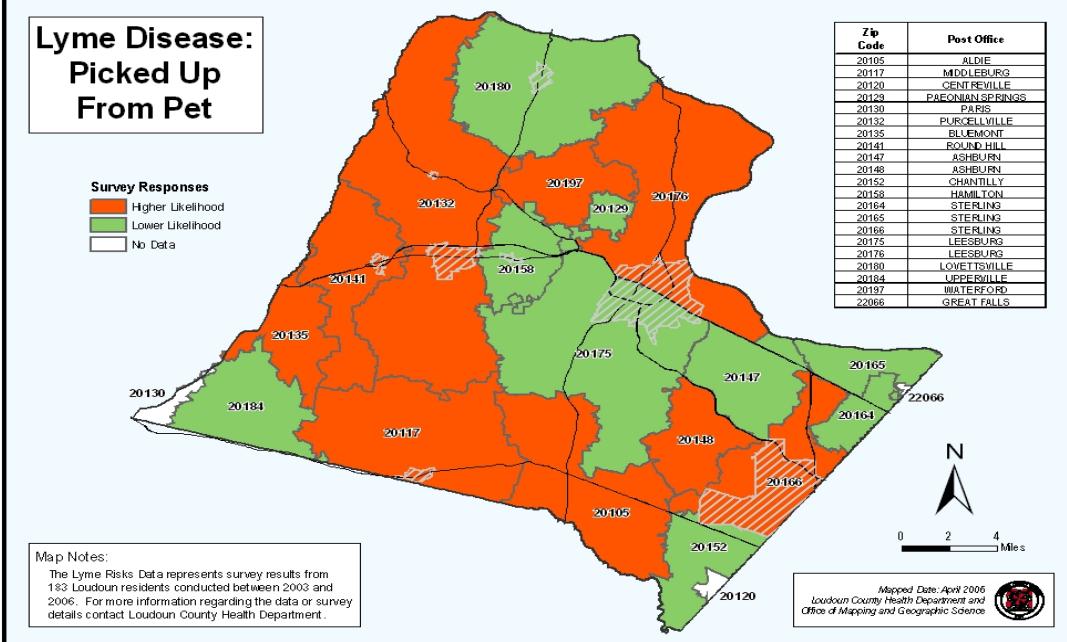
- Only 36% of respondents had a known tick bite



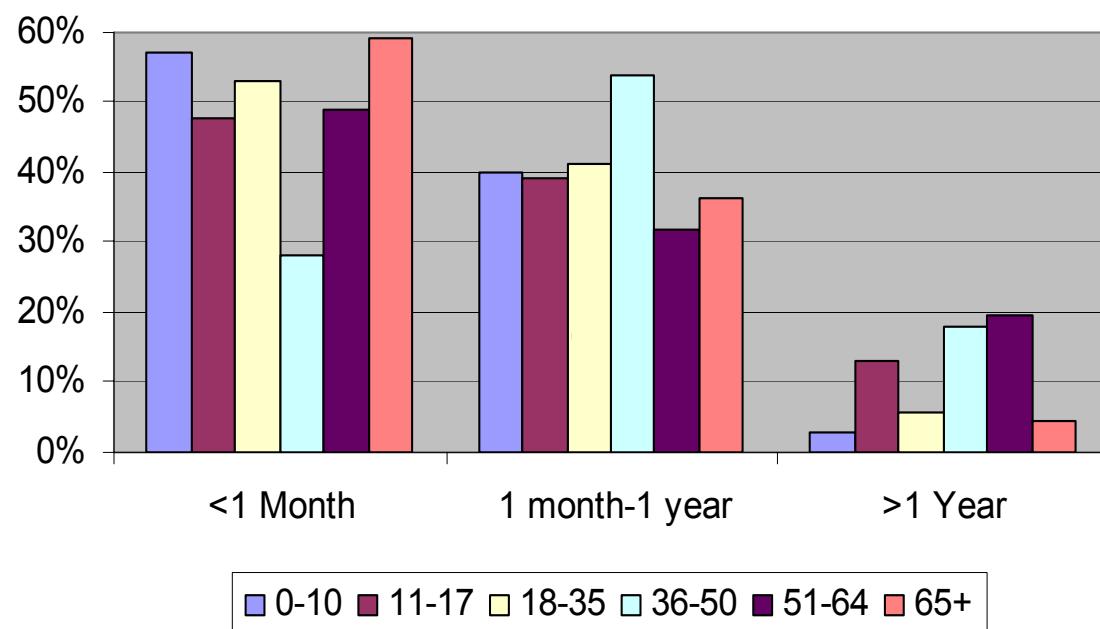
- 71% believe they were infected on their own property
- Higher in the West



- Those between 11 and 50 were less likely to report a known tick bite
- Those over 65 were more likely to believe they were infected on their own property



- 24% believed they picked up the tick from their pet
- Higher in the West

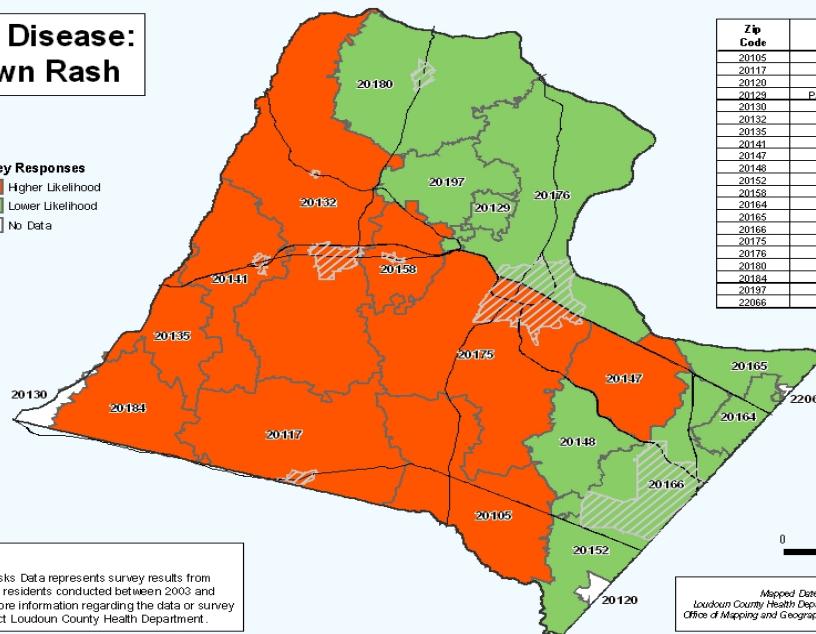


- Those between 36 and 50 were more likely to have a delay in diagnosis

# Symptoms

## Lyme Disease: Known Rash

**Survey Responses**  
Higher Likelihood  
Lower Likelihood  
No Data

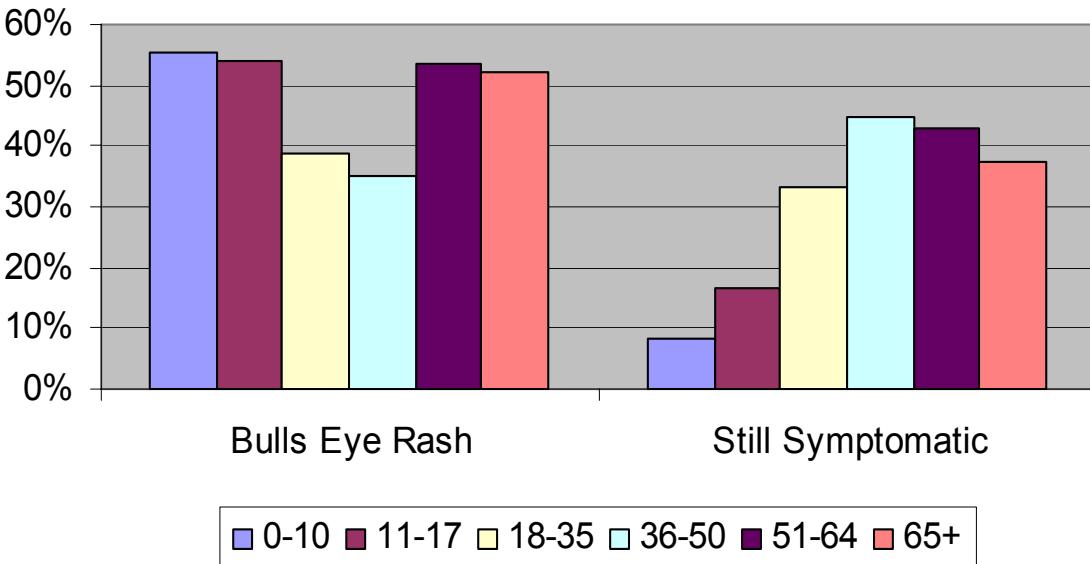


**Map Notes:**

The Lyme Risks Data represents survey results from 183 Loudoun residents conducted between 2003 and 2006. For more information regarding the data or survey details contact Loudoun County Health Department.

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- 48% had a known rash
- Higher in the West



- Those between 18 and 50 were less likely to remember a rash
- Those between 36 and 64 were most likely to remain symptomatic after treatment,
- No geographic difference

## Summary

- Loudoun residents of all ages and from all areas of the county are at risk for contracting Lyme disease
- Those in Western Loudoun County are at increased risk
- Only 35% had a known tick bite
- Only 50% had a known rash
- Over 70% were infected on their own property
- Half were diagnosed more than one month after infection
- Over 30% are still symptomatic



## Implications of Findings

- Intervention efforts should be directed towards Western Loudoun County
- Recommending tick checks may not be effective if people are being infected on their own property
- Environmental controls may be more effective
- Because rashes occurred in only 50% of cases it is important for healthcare providers to consider all symptoms of Lyme infection
- With over 30% having chronic symptoms, there is a significant burden of disease



## Next Steps

- Share results of study
- Launch second study, looking at the burden of disease in Loudoun County
- Engage affected communities
- Determine the appropriate role of the county and towns in preventing further infections

## Create a Tick Safe Zone

- Remove leaf litter and brush along the edge of lawns
- Use wood chips or gravel between lawns and wooded areas
- Mow lawn and clear brush/litter

